

## CATERPILLAR INTRODUCES THREE MID-SIZED HYDRAULIC EXCAVATORS, EACH WITH A DIFFERENT SWING RADIUS FOR DIFFERENT APPLICATIONS



Caterpillar introduces three new mid-sized hydraulic excavators—the 320D L with standard swing radius, the 320D LRR with reduced swing radius, and the 321D LCR with compact radius. The new D-Series machines feature greater performance and versatility than the C-Series machines they replace. The new excavators also feature the Cat® C6.4 engine with ACERT™ Technology for fuel-efficient operation and emissions compliance. A new, spacious cab promotes operator comfort in the 320D L and 320D LRR, and a new cab layout aids operators in the 321D LCR. New styling also sets the excavators apart.

The excavators have about 7 percent more engine power and increased hydraulic pressure for increased breakout force, greater lift force and increased drawbar pull, which combine to deliver faster cycle times and superior productivity. The heavy lift circuit is now standard on D-Series models. At the touch of a switch, heavy lift boosts hydraulic pressure for increased lift performance.

The three machines perform at comparable levels, but each has unique strengths:

- The 320D L replaces the 320C L and has a standard tail swing radius of 9 feet (2.75 m). It is designed for heavy and general construction and offers the largest digging envelope, more undercarriage and front linkage options, and ground-level access to all major service points. The 320D L has an operating weight of 47,554 pounds (21 570 kg).
- The 320D LRR replaces the 320C LU. The reduced radius design of the 320D LRR has a tail swing radius of 6 feet 7 inches (2.00 m). The reduced radius design suits the excavator well for work in areas with restricted space, such as in cities and in industrial and demolition applications. It can be equipped with a high ambient cooling package. The machine retains a full-size cab and excellent service access. The reduced radius machine offers a very stable platform, and additional counterweight gives the machine balance that is similar to the standard machine. The 320D LRR has an operating weight of 53,361 pounds (24 200 kg).
- The 321D LCR replaces the 321C LCR. With a tail swing radius of 5 feet 6 inches (1.68 m) the compact radius excavator has been designed to rotate with little to none of the counterweight extending beyond its tracks. To further minimize the working envelope, the boom is positioned farther back in the upper frame as compared to a standard excavator. The design reduces the front swing radius when the boom is pulled up for easier operation in limited spaces. The machine excels in road construction requiring work adjacent to active traffic lanes and in tunneling and other underground applications. Additional counterweight gives the machine balance and performance that is similar to the standard machine. The 321D LCR has an operating weight of 53,307 pounds (24 180 kg).

For expanded versatility, many factory-installed options are available. The D-Series excavators feature a wide range of factory-installed auxiliary hydraulic systems, including a one-way, high pressure, high flow circuit for hammers and vibratory plate compactors. Also, a two-way circuit is available for thumbs and other hydra-mechanical work tools.

Another option is the Tool Control System for D-Series models. The Tool Control System is exclusive to Caterpillar and allows operators and technicians to set auxiliary hydraulics flows and pressures by using the monitor in the cab instead of using expensive service tools. The customer can pre-set and store as many as 10 flow and pressure settings for 10 different hydra-mechanical work tools.

### High performance and fuel efficiency

The Cat C6.4 engine powers the new excavators and produces 148 net horsepower (110 kW). The engine employs ACERT Technology, which combines incremental improvements in fuel delivery, air management and electronic control to optimize engine performance and to meet U.S. EPA Tier 3 emissions regulations.

The ADEM™ A4 electronic control module manages fuel delivery to get the best performance per unit of fuel used. The engine management system provides flexible fuel mapping, allowing the engine to respond quickly to varying application needs.

The new excavators incorporate additional systems to save fuel. The Standard Power Mode can reduce fuel consumption as much as 8 percent when performing work that doesn't require full power. Automatic Engine Speed Control cuts engine speed in no-load or light-load situations. And the cooling system has a demand fan controlled by a viscous clutch, which automatically adjusts fan speed to meet cooling requirements.

Hydraulic system pressure is increased in the new excavators. Higher pressure creates stick and bucket forces that are about 7 percent greater than the previous models for aggressive digging. For enhanced control, the redesigned main hydraulic valve improves joystick response and makes finish work easier. As with the previous models, the D-Series models use a hydraulic cross sensing system that can maximize hydraulic power when needed for faster implement speeds.

The new machines have more lift capacity than the previous models, especially over the front. Drawbar pull is up about 5 percent greater for increased maneuverability and solid performance when moving on slopes or when traveling in poor underfoot conditions.

#### **New cab and operator station**

The operator station of the 320D L and 320D LRR is spacious, quiet and comfortable. A smaller, comfortable cab with an efficiency-enhancing layout equips the 321D LCR. The seat and armrests are easy to adjust to suit the operator. A new, optional air suspension seat with heater is available. The fully automatic climate control adjusts temperature and air flow, and it also determines which air outlet is best in each situation.

The new monitor is a full color liquid crystal display that can be adjusted to minimize the effects of glare. The graphical display is easier to read and navigate than the C-Series monitor—for both operators and maintenance technicians.

All glass is affixed directly to the cab, which eliminates window frames. Pillar-mounted wipers also increase the operator's viewing area.

For more information about the new 320D L, 320D LRR and 321D LCR, customers should contact their Cat dealer or visit the Caterpillar web site at [www.cat.com](http://www.cat.com).

#### **Basic Specifications for 320D L, 320D LRR and 321D LCR Hydraulic Excavators**

	<u><b>320D L</b></u>	<u><b>320D LRR</b></u>	<u><b>321D LCR</b></u>
Operating weight	47,554 lb (21 570 kg) <sup>1</sup>	53,361 lb (24 200 kg) <sup>1</sup>	53,307 lb (24 180 kg) <sup>2</sup>
Engine model	Cat C6.4 ACERT	Cat C6.4 ACERT	Cat C6.4 ACERT
Net power	148 hp (110 kW)	148 hp (110 kW)	148 hp (110 kW)
Bucket dig force (SAE)	28,079 lb (125 kN)	28,079 lb (125 kN)	28,079 lb (125 kN)
Max. reach (horizontal)	32 ft 4 in. (9860 mm)	32 ft 4 in. (9860 mm)	31 ft 9 in. (9690 mm)
Max. digging depth	20 ft 11 in. (6370 mm)	20 ft 11 in. (6370 mm)	21 ft 9 in. (6620 mm)
Track length	14 ft 7 inches (4455 mm)	14 ft 7 inches (4455 mm)	14 ft 7 inches (4455 mm)

<sup>1</sup>Long undercarriage; reach boom, 9 ft 7 in. stick, 1.18 cu yd bucket, 32 in. shoes.

<sup>2</sup>Long undercarriage; reach boom, 9 ft 6 in. stick, 1.3 cu yd bucket, 32 in. shoes.

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